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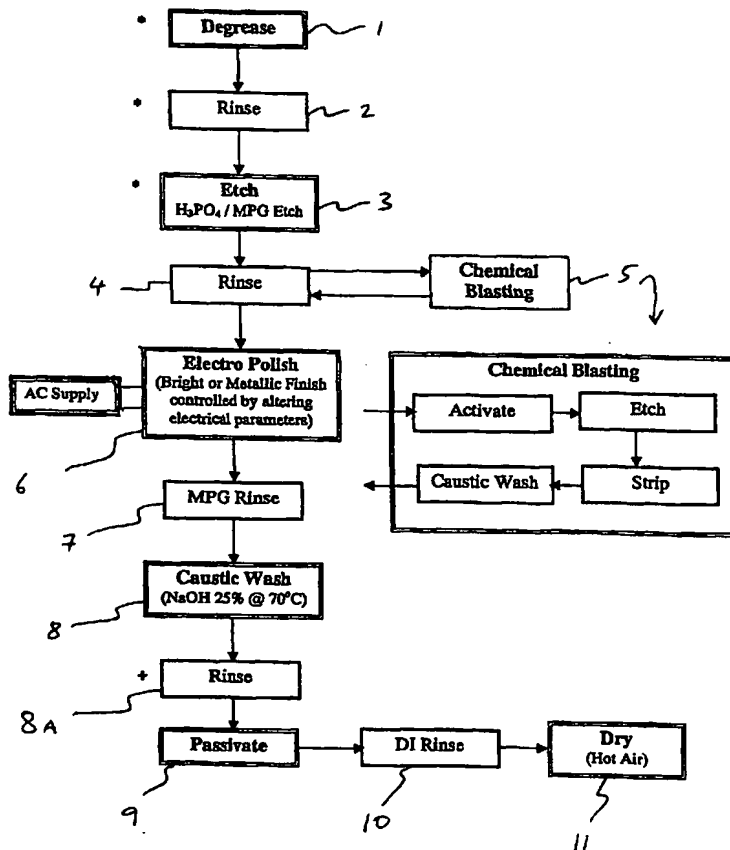
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(54) Title: SURFACE TREATMENT OF MAGNESIUM AND ITS ALLOYS



(57) Abstract: Methods of polishing and/or brightening surfaces of magnesium or magnesium alloy are disclosed. Polishing and/or brightening methods suitable to both high and low aluminium content magnesium articles (13) are disclosed. In each of the methods, the surface is polished (step 6) and then passivated (step 9). Using the disclosed methods it is possible to control aspects of the appearance of the surface to thereby, for example, obtain a bright and shiny surface to a magnesium or magnesium alloy article (13) which is both stable and corrosion resistant. It is also possible to provide a predetermined texture to the surface using optional steps (step 5).



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
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— with international search report

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ03/00200

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl. ⁷ : C25D 11/30, 11/36, 11/38												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols)												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI: C25D 11/30, 11/36, 11/38; C23F 1/22, 1/40, 3/00, 3/02, 3/04, 17/00; C25F 3/04, 3/18; C23C 22/- Keywords: magnesium, polish+, etch+, brighten+, clean+, pickl+, passivat+, anodis+, anodiz+, phosphatis+, phosphatiz+, chromatis+, chromatiz+, phosphatiz+, conversion coat+												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
X	Derwent Abstract Accession No. 93-231391/20, Class A88, E14, G03, M14 (A21, A25, A35) EP 908632 A (VOLKSWAGEN AG) 14 April 199 Abstract	1-3										
X	Derwent Abstract Accession No. 1999-395987/34, Class A35, E14, M13, (A21, A25, A81, A95, E19, E34, E36) DE 19800035 A (VOLKSWAGEN AG) 8 July 1999 Abstract	1-3, 18-19										
X	WO 0044557 A (HENKEL CORPORATION) 3 August 2000 Whole document	1-3, 18-19										
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention											
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art											
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"P" document published prior to the international filing date but later than the priority date claimed												
Date of the actual completion of the international search 15 December 2003		Date of mailing of the international search report 19 DEC 2003										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer THARU FERNANDO Telephone No : (02) 6283 2486										

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6319819 B (BESSER ET AL) 20 November 2001 Whole document	1-31
A	US 6596150 B (NISHINO ET AL) 22 July 2003 Whole document	1-31

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

T/NZ03/00200

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report			Patent Family Member			
DE	19800035	NONE				
EP	0908632	DE	19744312			
WO	0044557	JP	2000219975			
US	6319819	NONE				
US	6596150	EP	0960743	JP	2000043436	JP 2000043441
		US	2002153253			
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